

REMARKS

Claims 1, 3-11, 13-19 and 21-24 are pending in this application. By this Amendment, claims 1, 8, 11, 16 and 19 are amended. Various amendments are made to the claims for clarity and are unrelated to issues of patentability.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments: (1) place the application in condition for allowance; (2) do not raise any new issues requiring further search and/or consideration; and/or (3) place the application in better form for appeal, should an appeal be necessary. More specifically, the above amendments are merely for clarity of previously claimed subject matter. Entry is thus proper under 37 C.F.R. §1.116.

The Office Action rejects claims 1, 3-4, 8-11, 16-19 and 21-24 under 35 U.S.C. §102(e) by newly-cited U.S. Patent 6,333,789 to Shima. The Office Action also rejects claims 5-7 and 13-15 under 35 U.S.C. §103(a) over Shima in view of U.S. Patent 6,944,178 to Charriere et al. (hereafter Charriere). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites receiving information from each of a plurality of logical channels, each received information including information about an amount of re-transmission data that exists in a buffer that corresponds to the specific logic channel. Independent claim 1 also recites selecting data to transmit from one of the plurality of logical channels based at least on the received information about the amount of the re-transmission data that exists in the corresponding buffer for each specific logical channel. Independent claim 1 also recites that the re-transmission data includes data that was previously partially sent to a transport channel.

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The applied references do not teach or suggest at least these features of independent claim 1. More specifically, Shima does not teach or suggest features relating to a plurality of logical channels, receiving information from each of the plurality of logical channels and selecting data to transmit from one of the plurality of logical channels based on the amount of the re-transmission data that exists in the corresponding buffer.

The Office Action broadly cites Shima's col. 1, line 48-col. 2, line 48. Shima discloses that a plurality of logic channels may exist between a host computer 1 and a printer 11. Information such as print data may be sent from the host computer 1 through an interface 16 and be provided to specific ports 17A-17D corresponding to each logic channel. The ports 17A-17D are coupled to receive buffers 18A-18D. See col. 5, lines 50-64. A control section 12 may discriminate priority of the buffers 18A-18D by referring to a priority table 15. See, for example, col. 5, line 65-col. 6, line 19. An output of the printer 11 may be determined based on a priority provided within the priority table 15. Data may be provided from the selected buffer. This does not teach or suggest receiving information from each of a plurality of logic channels and selecting data to transmit from one of the plurality of logic channels based at least on the received information. Rather, the control section 12 selects the appropriate receive buffer based on priority information in the priority table 15. Shima does not teach or suggest selecting data to transmit from one of the plurality of logical channels. Shima does not teach the selecting data from logic channels.

Shima also does not teach or suggest features relating to re-transmission data. The Office Action appears to cite Shima's interrupt print data as corresponding to the claimed re-

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transmission data. However, interrupt data is not re-transmission data. Independent claim 1 recites that the re-transmission data includes data that was previously partially sent to a transport channel. Shima's interrupt data does not include data that was previously partially sent to a transport data channel. Further, Iwata does not teach or suggest receiving information where the received information includes information about an amount of re-transmission data that exists in the buffer. Iwata's control section 12 does not receive any information about the amount of re-transmission data that exists in a buffer that corresponds to each specific logic channel. Shima also does not teach or suggest selecting data to transmit based at least on received information about the amount of the re-transmission data that exists in the corresponding buffer for each specific logical channel. Shima does not teach or suggest features that relate to re-transmission data as recited in independent claim 1.

For at least these reasons, Shima does not teach or suggest all the features of independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 8 recites receiving information corresponding to a data amount of a buffer and a characteristic of data to be transmitted from each of a plurality of logical channels, and selecting data to transmit from one of the plurality of logic channels based at least on the data characteristic of each of the plurality of logical channels. Independent claim 8 also recites that selecting the data comprises: determining which ones of the plurality of logic channels include re-transmission data in a buffer corresponding to the specific logic channel, wherein the re-transmission data includes data previously sent from the corresponding logic channel with a data loss, and selecting one of the logical channels based on an amount of the re-transmission

data and a priority of each of the plurality of logical channels that are determined to include the re-transmission data in their corresponding buffer.

For at least similar reasons as set forth above, Shima does not teach or suggest at least these features of independent claim 8. More specifically, Shima does not teach or suggest the claimed re-transmission data includes data previously sent from the corresponding logic channel with a data loss. Shima also does not teach or suggest selecting one of the logical channels based on an amount of the re-transmission data and a priority of each of the plurality of logical channels that are determined to include the re-transmission data in their corresponding buffer. Thus, independent claim 8 defines patentable subject matter.

Independent claim 11 recites receiving information from each of a plurality of logical channels, and selecting data of a specific one of the logical channels based on priorities of the logical channels and based on an amount of re-transmission data that exists for each logical channel in a corresponding buffer, the selected data based on the received information, wherein the re-transmission data includes data that was previously partially sent from one of the logic channels. Independent claim 11 also recites transmitting the selected data from the transport channel.

For at least similar reasons as set forth above, Shima does not teach or suggest at least these features of independent claim 11. More specifically, Shima does not teach or suggest the claimed re-transmission data where the re-transmission data includes data that was previously partially sent from one of the logic channels. Shima also does not teach or suggest selecting data of a specific one of the logical channels based on priorities of the logical channels and based on

an amount of re-transmission data that exists for each logical channel in a corresponding buffer.

Thus, independent claim 11 defines patentable subject matter.

Independent claim 19 recites receiving information regarding data characteristics of each of a plurality of logical channels, the received information including re-transmission information. Independent claim 19 also recites selecting one of the logical channels based at least on the received re-transmission information regarding an amount of re-transmission data that exists for each specific logical channel in a corresponding buffer.

For at least similar reasons as set forth above, Shima does not teach or suggest at least these features of independent claim 19. More specifically, Shima does not teach or suggest selecting one of the logical channels based at least on the received re-transmission information regarding an amount of re-transmission data that exists for each specific logical channel in a corresponding buffer. Thus, independent claim 19 defines patentable subject matter.

Independent claim 23 recites a plurality of logical channels each to transmit information regarding a data characteristic of the respective logical channel, each logic channel including a corresponding buffer. Independent claim 23 also recites a transport channel to select one of the logical channels based at least on the transmitted information regarding the data characteristic of each respective logical channel, wherein the transport channel determines whether the logical channels include re-transmission data in the corresponding buffers and the transport channel selects one of the logical channels based on priorities of the plurality of logical channels that include the re-transmission data and an amount of the re-transmission data that exists in the corresponding buffers for the specific logical channels.

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For at least similar reasons as set forth above, Shima does not teach or suggest at least these features of independent claim 23. More specifically, Shima does not teach or suggest the transport channel determines whether the logical channels include re-transmission data in the corresponding buffers and the transport channel selects one of the logical channels based on priorities of the plurality of logical channels that include the re-transmission data and an amount of the re-transmission data that exists in the corresponding buffers for the specific logical channels. Thus, independent claim 23 defines patentable subject matter.

Accordingly, each of independent claims 1, 8, 11, 19 and 23 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3-11, 13-19 and 21-24 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

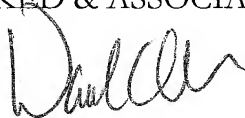
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concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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